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PPLICATION NO.	FILIN	G DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,095	07/0	7/2003	Paul R. Thayer	200314069-1 5096	
22879	7590	12/14/2006		EXAMINER	
		O COMPANY	NGO, CHUONG D		
		E. HARMONY RO ERTY ADMINIS	ART UNIT	PAPER NUMBER	
11 1 1 1 1 1 1 1 1	LLINS, CO 80527-2400			2193	
	•		DATE MAILED: 12/14/2006		

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)				
Office Action Summer:	10/613,095	THAYER ET AL.				
Office Action Summary	Examiner	Art Unit				
	Chuong D. Ngo	2193				
The MAILING DATE of this communication app Period for Reply	ears on the cover sheet with the	correspondence address				
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA  - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory period w  - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	TE OF THIS COMMUNICATION  16(a). In no event, however, may a reply be to the apply and will expire SIX (6) MONTHS from the application to become ABANDON	DN. imely filed  m the mailing date of this communication.  ED (35 U.S.C. & 133).				
Status						
1) Responsive to communication(s) filed on 22 Se	eptember 2006.					
<del>_</del>	action is non-final.					
3) Since this application is in condition for allowance except for formal matters, prosecution as to the m						
closed in accordance with the practice under E	-					
Disposition of Claims						
	ka a a a Pan Pan Pan					
4) Claim(s) 1-4,6-12 and 14-17 is/are pending in the application.  4a) Of the above claim(s) is/are withdrawn from consideration.						
	in from consideration.					
5)⊠ Claim(s) <u>1-4,6-8 and 17</u> is/are allowed.						
6) Claim(s) 9-12 and 14 -16 is/are rejected.						
7) Claim(s) is/are objected to. 8) Claim(s) are subject to restriction and/or election requirement.						
are subject to restriction and/or	election requirement.					
Application Papers	•					
9) The specification is objected to by the Examiner	• :					
10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner.						
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).						
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).						
11)☐ The oath or declaration is objected to by the Exa	aminer. Note the attached Office	e Action or form PTO-152.				
Priority under 35 U.S.C. § 119						
12) Acknowledgment is made of a claim for foreign	nriority under 25 U.S.C. \$ 440/a					
a) ☐ All b) ☐ Some * c) ☐ None of:	priority drider 33 0.3.C. § 119(a	a)-(d) Of (f).				
1. Certified copies of the priority documents	have been received					
2. Certified copies of the priority documents		tion No				
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).						
* See the attached detailed Office action for a list of the certified copies not received.						
ood the attached detailed Office action for a list t	or the certified copies flot receiv	eu.				
	•					
Attachment(s)						
1)						
B) Information Disclosure Statement(s) (PTO/SB/08)	5) Notice of Informal					
Paper No(s)/Mail Date	6) Other:	•				
Patent and Trademady Office						

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## **DETAILED ACTION**

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 9-12 and 14 -16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 9-12 and 14-16 are directed to a computer implemented method of calculation where the inputs are numbers and the results are also numbers. In order for a claimed invention that is directed to such a computer implemented method to be statutory, the claimed invention must accomplish a practical application. That is the claimed invention must transform an article or physical object to a different state or thing, or produce a useful, concrete and tangible result. State Street, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02. Also see "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility", OG Notices: 22 November 2005. It is clear from claims 9-12 and 14-16 that the claims merely involves calculations and manipulations of data in performing computations. The claimed invention does transform an article or physical object to a different state or thing. The inputs are numbers and the output is also a number. The result of the invention is merely numerical value without a practical application recited in the claims to it a real world result. Thus, the result is not useful, concrete and tangible. Therefore, the 9-12 and 14-16 are directed to non-statutory subject matter as the claims fail to assert a practical application to the invention.

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3. Claims 1-4, 6-8 and 17 are allowed.

4. Applicant's arguments filed 09/22/2006 have been fully considered but they are not persuasive with respect to the rejection under 35 U.S.C. 101.

It is respectfully submitted that what applicant's argued, such as eliminating a CSA and reduces propagation delays, are improvements of the inventions rather than practical applications. It should be noted that in determining whether the invention produces a useful, tangible, and concrete result, the focus is not on whether the steps taken to achieve a particular result are useful, tangible, and concrete, but rather on whether the final result achieved by the claimed invention is "useful, tangible, and concrete. Since the final result of the invention is merely numerical value without a practical application recited in the claims to it a real world result, the result is not useful, concrete and tangible. Therefore, the method of claims 9-12 and 14-16 are directed to non-statutory subject matter.

5. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong D. Ngo whose telephone number is (571) 272-3731. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Chuong D Ngo Primary Examiner Art Unit 2193